

## Definitions, Location and Piping Technical Standards Sections I-III

## Disclaimer pg. 13

- The listing of any proprietary product, technology or system in the Technical Standards should not be considered an endorsement of the product, technology or system, nor does it convey intellectual property rights.

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## Technical Standards Section I Definitions pg. 13

- **Accessory structure**
  - attached and detached garages
  - covered entryways
  - screened and enclosed 3-season (non-winterized)
  - porches/sunrooms
  - open decks, tool and lawn equipment storage sheds
  - gazebos, barns, etc.
  - All decks are permanent structures
- Small (<200 SF) portable structures w/out permanent foundation exempt

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## Accessory Structures/pools:



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## Accessory Structures/pools:



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## Decks



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## Is this an accessory structure?

- 7.5' x 7.5' shed placed on the ground.
- 7.5' x 7.5' shed placed on slab.



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## Technical Standards Section I Definitions

- **Approved aggregate** means stone and 2 inch tire chip aggregate or other product approved by the Commissioner of Public Health for use as backfill material in leaching system construction.

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## Technical Standards Section I Definitions

- **Bedroom**
  - Be a habitable or planned habitable space per Building Code requirements.
  - Provide privacy to the occupants
  - Full bathroom facilities
  - Entry is from a common area, not through a room already deemed a bedroom.

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## Technical Standards Section I Definitions

- **Building served**- physical structure that contains the habitable/interior portion of the building connected to the subsurface sewage disposal system.
- **Building sewer**- sewer pipe extending from the building served to the septic tank or grease interceptor tank.

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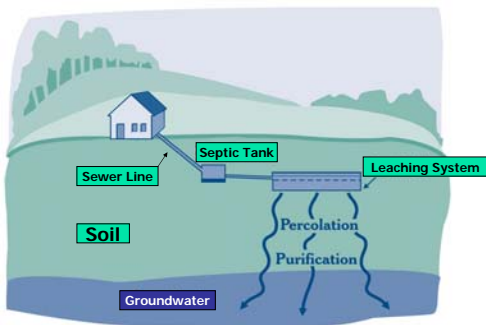
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## Technical Standards Section I Definitions

- **Effective leaching area**- a measure, in square feet, that takes into account the amount of infiltrative area and type of infiltrative interface. Effective leaching area criterion, product ratings, and sizing requirements are included in Section VIII.

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## Technical Standards Section I Definitions

- **Footing or foundation drains** drainage systems, consisting of stone or other free draining material with or without piping, which are installed to collect and redirect groundwater in order to protect below grade portions of a building.

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## Technical Standards Section I Definitions

- **Free draining material**- gravel, broken stone, rock fragments
- **Leaching gallery**- a minimum four-foot wide, level, hollow structure with perforated walls and which is surrounded by approved aggregate on the sides.
- **Leaching pit**- a hollow, covered structure with perforated sides and which is surrounded on the sides by approved aggregate.

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## Galleries – 12-inch high



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## Galleries - 27-inch Teepees



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## Galleries – 4' x 4'



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## Gallery System



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## Technical Standards Section I Definitions

- **Leaching system-** structure, excavation or other facility designed to allow settled sewage to percolate into the underlying soil without overflow and to mix with the groundwater.
- **Leaching trench-** a level excavation, not exceeding four feet in width, with vertical sides and flat bottoms filled with approved aggregate and equipped with a single distribution line running the entire length of the excavation.

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## Technical Standards Section I Definitions

- **Proprietary leaching system-** a manufactured product approved by the Commissioner of Public Health to be used as a leaching system.
- **Select fill-** clean bank run sand, clean bank run sand and gravel, or approved manufactured fill having a gradation which conforms to the specifications stipulated in Section VIII A of the Technical Standards.

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## Technical Standards Section I Definitions

- **Solid pipe-** pipe that has no loose or open joints, perforations, slots or porous openings that would allow seepage to escape from, or water to enter the pipe.

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## Technical Standards Section I Definitions

- **Stone aggregate-** broken stone, crushed stone, or screened gravel meeting Department of Transportation Form 816 Specification M.01.01 for No. 4 and 6 stone
- Free of silt, dirt or debris meeting gradation specifications

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## Section I: Definitions

	No. 4 Stone Aggregate (A.C.A., 1 & 1 1/4" Stone)	No. 6 Stone Aggregate (A.C.A., 1 & 1 1/4" Stone)
SEIVE SIZE	PERCENT PASSING (by weight)	PERCENT PASSING (by weight)
2-inch	100	N/A
1 1/2-inch	90 - 100	N/A
1-inch	20 - 55	100
3/4-inch	0 - 15	90 - 100
1/2-inch	N/A	20 - 55
3/8-inch	0 - 5	0 - 15
#4	N/A	0 - 5
#40	0 - 3	0 - 3
#200	0 - 1.5	0 - 1.5



- Table will be located in the Leaching System Section (Section VIII A) pg. 38



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## Section I: Definitions

- No 4 (1 & 1/4" Stone) and No. 6 (3/4") stone.
- The Leaching System Section (Section VIII) will allow use of smaller stone (3/4") with leaching trenches and proprietary systems.
- Leaching pits and galleries will require use of the larger stone.

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## Technical Standards Section I Definitions

- **Tight Pipe-** those pipes that exhibit both wall strength and watertight joints. Pipes approved for use under this classification are listed in Table No. 2-C.

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## Technical Standards Section I Definitions

- **Two (2) inch nominal tire chip aggregate-** tire chips approved for distribution by the Department of Environmental Protection (DEP) for beneficial use in leaching systems in accordance with DEP's General Permit issued on September 30, 2005.

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## Section I. Definitions (pg. 14)

- **2-inch Nominal Tire Chips:** Includes sizing criteria, maximum wire protrusion. DEP General Permit referenced. Additional requirements included in Section VIII.

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# Technical Standards

## Section II Location of Septic System- Table No.1 (Pg. 15)

Item	Separating Distance (Feet)	Special Provisions
A. Waste supply well (possible open loop, perforated, ungrouted), spring or domestic water supply pipe <i>Regulated with lateral flow</i> - 10 gal. per minute - 10 to 50 gal. per minute - 50 gal. per minute	75 150 200	1. Separating distance to the leaching system shall be doubled when the production rate is faster than one minute each and the leaching system is less than 1 foot above bedrock. 2. Separating distance shall be increased as necessary to protect the sanitary quality of a public water supply well.
B. Human latrine in adjacent property	15	Building without drains. See items G & H for distance to building with drains.
C. Building served	15	Building without drains. See items G & H for distance to building with drains. Separating distance to a septic tank, septic tank pump, chamber, grease interceptor tank shall be reduced to 12 feet for buildings without drains.
D. Open watercourse	50	When not located on a public water supply watershed, distance shall be reduced as necessary to not less than 25 feet to less than 100 feet from the effective date of this regulation (16-93) and thereafter recorded as required by statute.
E. Public water supply reservoir	100	
F. Surface or groundwater drain constructed of solid pipe	25	Tight pipe with rubber gasketed joints or accepted equal (see Table No. 3-C) are exempted from this requirement as long as the pipe excavation is not backfilled with free draining material, however no tight pipe shall be less than 5 feet from system. Leaking pipes may be required to comply with other regulations.

E. Public water supply reservoir	100	See regulation 16-93 and thereafter recorded as required by statute.
F. Surface or groundwater drain constructed of solid pipe	25	Tight pipe with rubber gasketed joints or accepted equal (see Table No. 3-C) are exempted from this requirement as long as the pipe excavation is not backfilled with free draining material, however no tight pipe shall be less than 5 feet from system. Leaking pipes may be required to comply with other regulations.
G. Groundwater drain (certain, footing, foundation, etc.), storm water infiltration or retention/detention system located up gradient, or on the side of system	25	
H. Groundwater drain (certain, footing, foundation, etc.), storm water infiltration or retention/detention system located down gradient	50	1. No such drain shall be constructed down gradient of the leaching system for the purpose of collecting average effluent regardless of the diameter. 2. Distance to septic tank pump chamber, grease interceptor tank shall be reduced to 25 feet of tank as verified to be watertight (Concrete tanks - See Section V A 6).
I. Top of embankment (Down gradient and on side)	10	Cuts within 50 feet down gradient of leaching system shall not be allowed if bleed-out conditions are possible.
J. Property line	10	1. Separating distance between the primary leaching system and a down gradient property line shall be increased to 25 feet whenever M.S.S is applicable. 2. Separating distance to the leaching system shall be increased to 15 feet whenever the top of the leaching system is above natural grade unless grading rights from the affected property owners are secured or retaining walls are utilized (See Section VII A for retaining wall parameters). Excavations between 10 - 25 feet from system shall not be backfilled with free draining material.
K. Possible water and/or irrigation lines which flow under pressure	10	Excavations between 10 - 25 feet from system shall not be backfilled with free draining material.
L. Below ground swimming pool	25	See item H for down gradient pools with drains.
M. Above ground swimming pool	10	Includes hot tubs.
N. Accessory structure	10	Structure shall have no footing drains. See items G & H if drains provided. Structures without full wall, first protected footings shall be reduced to 5 feet.
O. Utility service trench (Underground electric, gas, phone services, etc.)	5	Excavations between 5 - 25 feet from system shall not be backfilled with free draining material.
P. Water treatment wastewater disposal system	10	See Section X.
Q. Closed loop predrilled system		
Borehole (Vertical)	75	Separating distance from borehole to leaching system and watertight tanks shall be reduced to 50 feet and 25 feet, respectively, as long as a CT licensed well driller installs borehole with a permit conforming construction standards per Department of Public Health EHS Circular Letter #2007-12 dated April 27, 2007. Excavations between 10 - 25 feet from system shall not be backfilled with free draining material.
Horizontal loop predrilled piping	10	

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## Section II Location of Septic System

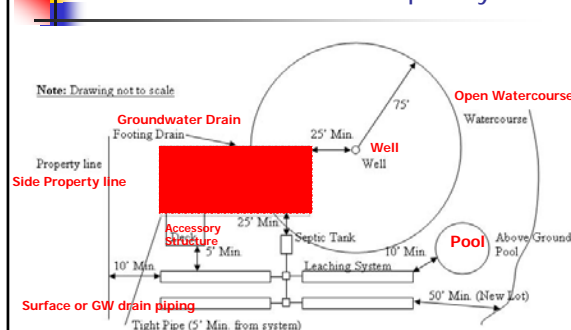


Table No. 1 pg. 15



■ Item A (Well)

- water supply wells (potable, open loop geothermal, irrigation).
- See Item Q for closed loop geothermal well.
- Special provision language modified doubled separating distances only applies to leaching system not to septic tanks.



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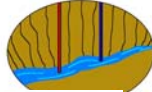
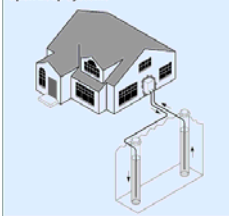
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Open loop Systems

Open Loop Systems



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Table No. 1 pg. 15

■ Item J (Property Line)

- Special provisions for elevated leaching systems (top of leaching system above natural grade)
  - Distance to leaching system shall be increased to 15 feet unless grading rights from affected property owner are secured, or unless retaining walls are utilized.
  - Additional language added to Leaching System Section (Section VIII A for further requirements on retaining walls.

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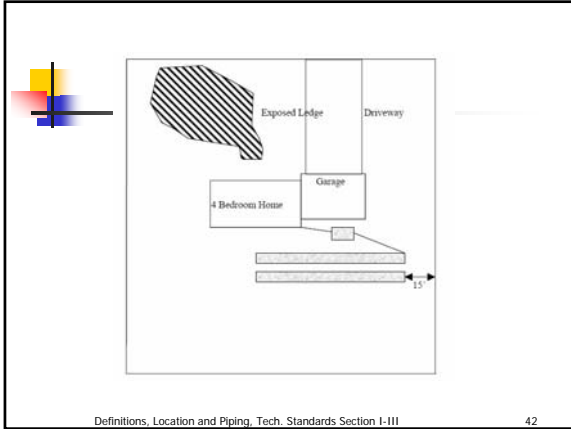
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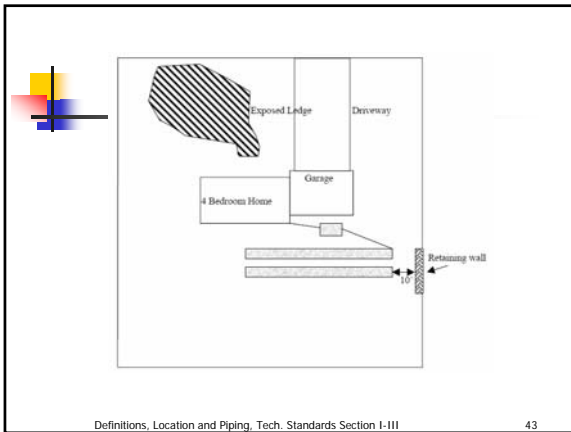
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**Table No. 1** pg. 15

- Item Q (Closed loop Geothermal Systems)
- Vertical borehole shall be 75 feet from sewage systems
  - special provision language to allow reduced separating distances if certain construction standards are followed and installation by licensed well driller per DPH EHS Circular Letter #2007-12, dated 4/27/07.
  - Reduced distances to 50' to leaching system & 25' to watertight tanks.
- Borehole shall be kept 10' minimum to sewer piping listed in Tables 2, 2-C, and 2-D
- 10 feet minimum separation between sewage disposal systems and horizontal loop lines & geothermal piping.

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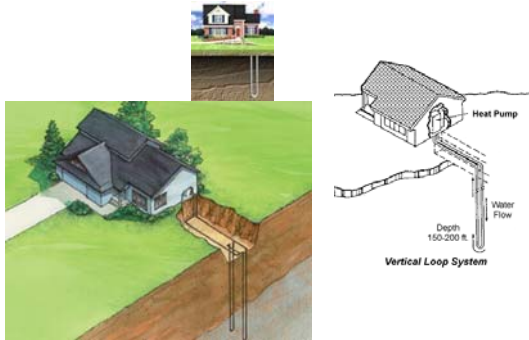
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## Vertical Closed Loop Systems




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## Horizontal Closed Loop Systems




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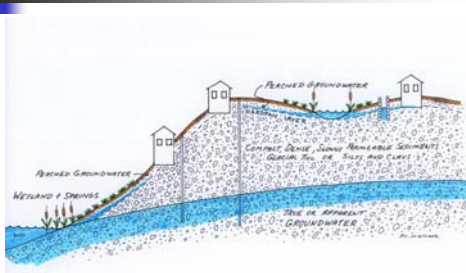
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## What is Down Gradient?




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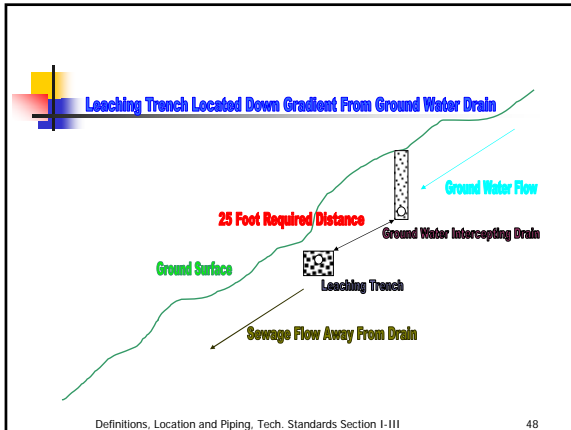
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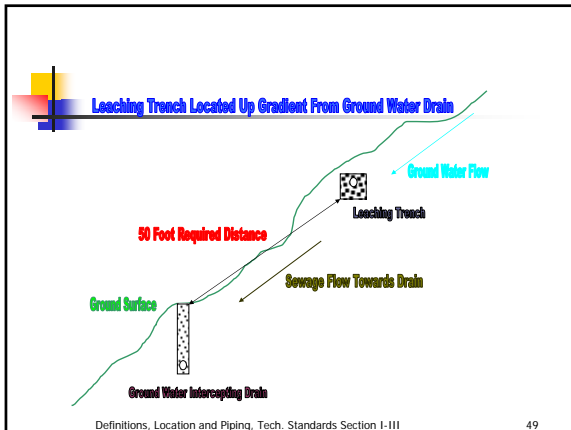
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## Record Plan or As-built

- Following system installation a record plan or as-built drawing must be prepared by the installer unless Local Health requires an Engineered drawing.
  - Building sewer exit location
  - Tank cleanouts
  - Distribution boxes and access ports
  - Ends of rows
- Scale plan
- Tie Plan

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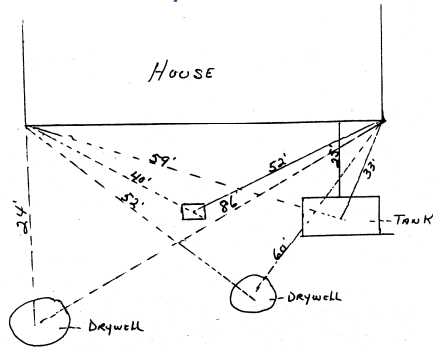
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Is this acceptable?




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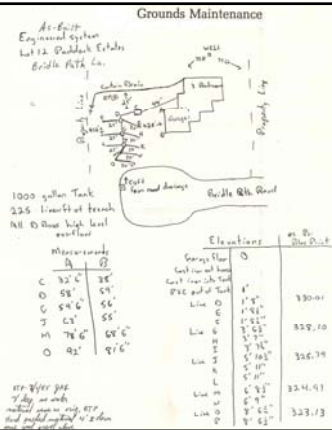
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- How about this one?




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## Plan Adherence

- The installer is responsible for installing the system in accordance with the approved plan.
- Site conditions not noted on the plan must be reported to the local health department and, if applicable, the design engineer

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## System Abandonment

- Eliminate danger of system components from collapsing.
- Property owner's responsibility
- Proper abandonment procedure
  - Pump
  - Crush
  - Backfill

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## Benchmarks

- Plans prepared by a Professional Engineer must have vertical and horizontal controls
- Field staking is acceptable
- Plans must have accurate topography

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## Benchmarks

- a point of reference for a measurement
- the height above sea level
- Usually set by the engineer in a permanent location, top of catch basin or foundation. Occasionally a nail in a tree, however not recommended.

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## Section III: Piping

### ■ Building Sewers

- Minimum size 4" pipe
- Minimum pitch 4" pipe: 1/4" per foot
- Minimum pitch 6"- 8" pipe: 1/8" per foot
- High strength pipe
- Table No. 2

Definitions, Location and Piping, Tech. Standards Section I-III

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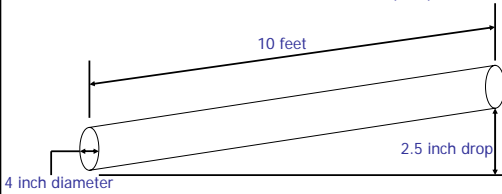
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## Building Sewer Pipe Pitch

10 feet X 0.25 (1/4 inch / foot) = 2.5 inch drop required



2.5 inch X 0.083 (1 foot / 12 inches) = 0.208 foot drop required

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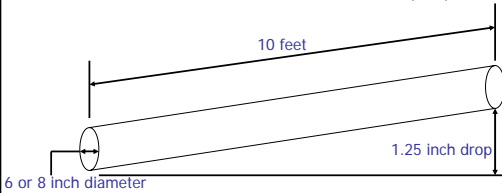
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## Building Sewer Pipe Pitch

10 feet X 0.125 (1/8 inch / foot) = 1.25 inch drop required



1.25 inch X 0.083 (1 foot / 12 inches) = 0.104 foot drop required

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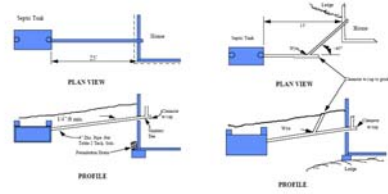
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# Piping



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Table No. 2  
Accepted Building Sewer Pipe from Building Served to Septic Tank or Grease Interceptor Tank  
& Accepted Sewer Pipe Within the Sanitary Radius of a Water Supply Well

NOTE: The local authority of health shall inspect all building sewer piping and joints prior to covering.

USE	PIPE DESCRIPTION	ACCEPTABLE JOINT	REMARKS
Building sewer from foundation wall to septic tank or grease interceptor tank, within 25 feet of building served.	Cast iron bellows ASTM A 888	Cast iron split sleeve bellows joint with rubber gasket, NIO coupling or equal.	Roll-on "donut type" gaskets not acceptable if connections in within 25 feet of foundation wall. Pipe must be properly bedded, laid in straight line on uniform grade.
OR Sewer pipe (building or distribution) within the sanitary radius of a water supply well. NOTE: The following maximum distances shall be maintained from wells based on withdrawal rates: -10 gpm: 25 feet 10-50 gpm: 75 feet 50-100 gpm: 100 feet	Cast iron bell and spigot ASTM A 74	Rubber compression gaskets	FERROCO - minimum over 1" wide shall be allowed for connection of dissimilar piping materials
NOTE: Building sewer may cross potable water lines under pressure. To reduce separation distances for the following other uses, consult Table No. 1.	PVC Schedule 40, ASTM D 1781 or ASTM D 2681	Rubber compression gasket couplings, Hanco Mfg., ASTM D 3119 or equal. OR Solvent weld couplings, fittings using proper two step PVC solvent solution procedure.	"C" or "J" made approved materials and bonded coupling on PVC Schedule 40, ASTM D 1781 or 2681 is acceptable. CS, galv. Piping - Schedule 40, 36 inch, radius crown piping (RCP) may be utilized without a ground. ABS Schedule 40 is not acceptable.
Human habitations on adjacent property. Building served. Property line. Pressure water lines. Overlapping ponds. Accessory structures. Utility service trench. Closed loop professional berseide (10 feet minimum).	Double size ANSI A 21.51	Rubber compression gaskets	Connections to cast iron building sewer must be made with compression gaskets.
	PVC, AWWA C 900 (PC 100 psi min.)	Rubber compression gaskets	"O" ring gasket is not acceptable.
	PVC, ASTM F 1760, Schedule 40	Rubber compression gaskets	Only 4" pipe approved. Maximum 1' cover in vehicle loaded traffic areas.

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# Section III: Piping

- Public Sewer Connections and Lines Near Wells (25' to 75')
  - Table No. 2A
  - Table No. 2B

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Table No. 2-A Accepted Sewer Pipe for Sewer Connections Laterally Within the Sanitary Radius of a Water Supply Well			
All sewer lines installed within the sanitary radius of a water supply well shall be supported and approved by the local director of health or state superior prior to back filling.			
USE	PIPE DESCRIPTION	ACCEPTABLE JOINT	REMARKS
Sewer connections laterally to public sewers within the sanitary radius of a water supply well. NOTE: The following maximum distances shall be maintained from wells based on withdrawal rates: -10 gpm: 25 feet 10 - 50 gpm: 75 feet >50 gpm: 100 feet	Cast iron bellows ASTM A 888	Cast iron split down bellows connection with rubber gaskets. No coupling or equal to 3" wide heavy duty stainless steel bonded coupling with rubber gaskets. Clamp all ANSACO SD 4000 or equal	Rail-on "donut type" gaskets not acceptable if used within 75 feet of well. Pipe must be properly bedded in accordance with pipe manufacturer's specifications, laid in a straight line on a uniform grade.
	Cast iron bell and spigot, ASTM A 74	Rubber compression gaskets	
New Pump (i.e., Grinder) vaults are sources of pollution and must be located at least 75 feet from >10 gpm water supply wells. Increased separating distances required for wells with withdrawal rates of 10 gpm or greater (See PWC Sec. 19-13-B51d).	Decorative iron ANSII A21.51	Rubber compression gasket	
	Extra strength PVC pressure water pipe AWWA C 900 (PC 120 psi min.)	Rubber compression gasket	
Note: Force mains must use approved pipe used for pressure applications.	Schedule 40, PVC ASTM D 1781 or ASTM D 2681	Rubber compression gasketed couplings. Extra 100' ASTM D 1139 or equal OR: Solvent weld couplings (fitting using proper two step PVC solvent solution procedure)	Use of 3" wide approved stainless steel bonded couplings on PVC Schedule 40 ASTM D 1781 is acceptable ABS Schedule 40 is not acceptable
	PVC ASTM D 2541, SDR 35, 17 or 13.5		Joints must meet ASTM D 3212 specifications
	PVC ASTM F 1760, Schedule 40 or SDR 35		Building in accordance with ASTM D 2521 for PVC pipe
	PVC ASTM D 3034, SDR 35 PVC ASTM F 789 PVC ASTM F 479	Integrated rubber compression gaskets or rail-on compression gaskets	Joints must meet ASTM D 3212
	PVC CONTECH A-3028, ASTM F 649 PVC CONTECH A-3030, ASTM F 649 PE, ASTM D 3035, SDR 11 or 9	Electronic gasket inserts ASTM F 477 Gaskets meet ASTM F 477 No joints, then use bellows connection or	Joints meet ASTM D 3212 Joints meet ASTM D 3212


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## Municipal Sewer Lateral

**Note: Pump (i.e., Grinder) vaults are sources of pollution and must be located at least 75 feet from wells pumping less than 10 gallons per minute**



**Well Regs. 19-13-B51**

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Table No. 2-B Accepted Pipe for Public Sewer Mains Within the Sanitary Radius of a Water Supply Well			
All public sewer mains installed within the sanitary radius of a water supply well shall be low pressure as tested in the presence of the design engineer. A report of the test results should be submitted to the local director of health.			
USE	PIPE DESCRIPTION	ACCEPTABLE JOINT	REMARKS
Public sewer mains within the sanitary radius of a water supply well. NOTE: The following maximum distances shall be maintained from wells based on withdrawal rates: -10 gpm: 25 feet 10 - 50 gpm: 75 feet >50 gpm: 100 feet	Cast iron bellows pipe ASTM A 888	Cast iron split down bellows connection with rubber gaskets. No coupling or equal to 3" wide heavy duty stainless steel bonded coupling with rubber gaskets. Clamp all ANSACO SD 4000 or equal	Rail-on "donut type" gaskets not acceptable if used within 75 feet of well. Pipe must be properly bedded in accordance with pipe manufacturer's specifications, laid in a straight line on a uniform grade.
	Decorative iron ANSII A21.51	Rubber compression gaskets	
Note: Force mains must use approved pipe used for pressure applications.	Extra strength PVC pressure water pipe AWWA C 900 (PC 120 psi min.)	Rubber compression gaskets	
	Reinforced concrete water pipe, and cylinder type, not pre-stressed AWWA C 309	Rubber compression gaskets	
Note: Pump stations structures are sources of pollution and must be at least 75 feet from >10 gpm water supply wells. Increased separating distances required for wells with withdrawal rates of 10 gpm or greater (See PWC Sec. 19-13-B51d).	Schedule 40, PVC ASTM D 1781 or ASTM D 2681	Rubber compression gasketed couplings. Extra 100' ASTM D 1139 or equal OR: Solvent weld couplings (fitting using proper two step PVC solvent solution procedure)	Use 3" wide stainless steel bonded couplings on PVC Schedule 40 ASTM D 1781 is acceptable ABS Schedule 40 is not acceptable
	PVC ASTM D 2541, SDR 35, 17 or 13.5		Joints must meet ASTM D 3212 specifications
	PVC ASTM F 1760, Schedule 40 or SDR 35		Building in accordance with ASTM D 2521 for PVC pipe
	PVC ASTM D 3034, SDR 35 PVC ASTM F 789 PVC ASTM F 479	Integrated rubber compression gaskets or rail-on compression gaskets	Joints must meet ASTM D 3212
	PVC CONTECH A-3028, ASTM F 649 PVC CONTECH A-3030, ASTM F 649 PE, ASTM D 3035, SDR 11 or 9	Electronic gasket inserts ASTM F 477 Gaskets meet ASTM F 477 No joints, then use bellows connection or	Joints meet ASTM D 3212 Joints meet ASTM D 3212

Definitions, Location and Piping, Tech. Standards Section I-III

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## Section III: Piping

### ■ Acceptable tight pipes:

Table No. 2C

- Less than 25' from open watercourse
- Groundwater or storm piping less than 25'
- Distribution piping located less than minimum separation distances in Table No. 1

Definitions, Location and Piping, Tech. Standards Section I-III

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Table No. 2-C  
Accepted Tight Pipe for Building Sewer & Distribution Piping Within 25 Feet of Open Watercourse or Drain,  
or Groundwater or Surface Water Piping within 25 Feet of Subsurface Sewage Disposal System

USE	PIPE DESCRIPTION	ACCEPTABLE JOINT	REMARKS
Building sewer or distribution piping within 25 feet of an open watercourse, surface or groundwater drain, collector, building or foundation drain	Cast iron hubless pipe ASTM A-488	Cast iron gasket water-tight connection with rubber gasket 3/16" complying with 2" wide, heavy duty extruded neoprene bonded coupling with rubber gasket. Clamp-A-Bolt (NASC) SD-4000 or equal.	Roll-on "donut type" gaskets not acceptable if used within 25 ft. of watercourse. Pipe must be properly bedded in accordance with manufacturer's specifications, laid in a straight line in a uniform grade.
OR	Cast iron bell and flange ASTM A-134	Rubber compression gaskets	
Groundwater and surface water disposal pipes within 25 feet of a subsurface sewage disposal system.	Extra strength PVC, pressure rated pipe (ASTM C-909, PVC 150 psi min.)	Rubber compression gaskets	
New Building sewer within 25 feet of building sewer by Table No. 2 piping	Reinforced Concrete Pipe ASTM C-76	Rubber compression gaskets, ASTM C-493	
To reduce separation distances for the following other items listed in Table No. 1:	Reinforced concrete water pipe, steel cylinder type, ASTM A-C-300, C-301	Rubber compression gaskets	
Household water in adjacent property	Schedule 40, PVC ASTM D-1782 or ASTM D-3085	Rubber compression gaskets complying, House 300, ASTM D-1782 or equal, as follows: solid coupling fittings using proper two step PVC solvent solution procedure	"Use of 3" or 4" or 6" or 8" or 10" or 12" or 14" or 16" or 18" or 20" or 22" or 24" or 26" or 28" or 30" or 32" or 34" or 36" or 38" or 40" or 42" or 44" or 46" or 48" or 50" or 52" or 54" or 56" or 58" or 60" or 62" or 64" or 66" or 68" or 70" or 72" or 74" or 76" or 78" or 80" or 82" or 84" or 86" or 88" or 90" or 92" or 94" or 96" or 98" or 100" or 102" or 104" or 106" or 108" or 110" or 112" or 114" or 116" or 118" or 120" or 122" or 124" or 126" or 128" or 130" or 132" or 134" or 136" or 138" or 140" or 142" or 144" or 146" or 148" or 150" or 152" or 154" or 156" or 158" or 160" or 162" or 164" or 166" or 168" or 170" or 172" or 174" or 176" or 178" or 180" or 182" or 184" or 186" or 188" or 190" or 192" or 194" or 196" or 198" or 200" or 202" or 204" or 206" or 208" or 210" or 212" or 214" or 216" or 218" or 220" or 222" or 224" or 226" or 228" or 230" or 232" or 234" or 236" or 238" or 240" or 242" or 244" or 246" or 248" or 250" or 252" or 254" or 256" or 258" or 260" or 262" or 264" or 266" or 268" or 270" or 272" or 274" or 276" or 278" or 280" or 282" or 284" or 286" or 288" or 290" or 292" or 294" or 296" or 298" or 300" or 302" or 304" or 306" or 308" or 310" or 312" or 314" or 316" or 318" or 320" or 322" or 324" or 326" or 328" or 330" or 332" or 334" or 336" or 338" or 340" or 342" or 344" or 346" or 348" or 350" or 352" or 354" or 356" or 358" or 360" or 362" or 364" or 366" or 368" or 370" or 372" or 374" or 376" or 378" or 380" or 382" or 384" or 386" or 388" or 390" or 392" or 394" or 396" or 398" or 400" or 402" or 404" or 406" or 408" or 410" or 412" or 414" or 416" or 418" or 420" or 422" or 424" or 426" or 428" or 430" or 432" or 434" or 436" or 438" or 440" or 442" or 444" or 446" or 448" or 450" or 452" or 454" or 456" or 458" or 460" or 462" or 464" or 466" or 468" or 470" or 472" or 474" or 476" or 478" or 480" or 482" or 484" or 486" or 488" or 490" or 492" or 494" or 496" or 498" or 500" or 502" or 504" or 506" or 508" or 510" or 512" or 514" or 516" or 518" or 520" or 522" or 524" or 526" or 528" or 530" or 532" or 534" or 536" or 538" or 540" or 542" or 544" or 546" or 548" or 550" or 552" or 554" or 556" or 558" or 560" or 562" or 564" or 566" or 568" or 570" or 572" or 574" or 576" or 578" or 580" or 582" or 584" or 586" or 588" or 590" or 592" or 594" or 596" or 598" or 600" or 602" or 604" or 606" or 608" or 610" or 612" or 614" or 616" or 618" or 620" or 622" or 624" or 626" or 628" or 630" or 632" or 634" or 636" or 638" or 640" or 642" or 644" or 646" or 648" or 650" or 652" or 654" or 656" or 658" or 660" or 662" or 664" or 666" or 668" or 670" or 672" or 674" or 676" or 678" or 680" or 682" or 684" or 686" or 688" or 690" or 692" or 694" or 696" or 698" or 700" or 702" 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or 954" or 956" or 958" or 960" or 962" or 964" or 966" or 968" or 970" or 972" or 974" or 976" or 978" or 980" or 982" or 984" or 986" or 988" or 990" or 992" or 994" or 996" or 998" or 1000" or 1002" or 1004" or 1006" or 1008" or 1010" or 1012" or 1014" or 1016" or 1018" or 1020" or 1022" or 1024" or 1026" or 1028" or 1030" or 1032" or 1034" or 1036" or 1038" or 1040" or 1042" or 1044" or 1046" or 1048" or 1050" or 1052" or 1054" or 1056" or 1058" or 1060" or 1062" or 1064" or 1066" or 1068" or 1070" or 1072" or 1074" or 1076" or 1078" or 1080" or 1082" or 1084" or 1086" or 1088" or 1090" or 1092" or 1094" or 1096" or 1098" or 1100" or 1102" or 1104" or 1106" or 1108" or 1110" or 1112" or 1114" or 1116" or 1118" or 1120" or 1122" or 1124" or 1126" or 1128" or 1130" or 1132" or 1134" or 1136" or 1138" or 1140" or 1142" or 1144" or 1146" or 1148" or 1150" or 1152" or 1154" or 1156" or 1158" or 1160" or 1162" or 1164" or 1166" or 1168" or 1170" or 1172" or 1174" or 1176" or 1178" or 1180" or 1182" or 1184" or 1186" or 1188" or 1190" or 1192" or 1194" or 1196" or 1198" or 1200" or 1202" or 1204" or 1206" or 1208" or 1210" or 1212" or 1214" or 1216" or 1218" or 1220" or 1222" or 1224" or 1226" or 1228" or 1230" or 1232" or 1234" or 1236" or 1238" or 1240" or 1242" or 1244" or 1246" or 1248" or 1250" or 1252" or 1254" or 1256" or 1258" or 1260" or 1262" or 1264" or 1266" or 1268" or 1270" or 1272" or 1274" or 1276" or 1278" or 1280" or 1282" or 1284" or 1286" or 1288" or 1290" or 1292" or 1294" or 1296" or 1298" or 1300" or 1302" or 1304" or 1306" or 1308" or 1310" or 1312" or 1314" or 1316" or 1318" or 1320" or 1322" or 1324" or 1326" or 1328" or 1330" or 1332" or 1334" or 1336" or 1338" or 1340" or 1342" or 1344" or 1346" or 1348" or 1350" or 1352" or 1354" or 1356" or 1358" or 1360" or 1362" or 1364" or 1366" or 1368" or 1370" or 1372" or 1374" or 1376" or 1378" or 1380" or 1382" or 1384" or 1386" or 1388" or 1390" or 1392" or 1394" or 1396" or 1398" or 1400" or 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2734" or 2736" or 2738" or 2740" or 2742" or 2744" or 2746" or 2748" or 2750" or 2752" or 2754" or 2756" or 2758" or 2760" or 2762" or 2764" or 2766" or 2768" or 2770" or 2772" or 2774" or 2776" or 2778" or 2780" or 2782" or 2784" or 2786" or 2788" or 2790" or 2792" or 2794" or 2796" or 2798" or 2800" or 2802" or 2804" or 2806" or 2808" or 2810" or 2812" or 2814" or 2816" or 2818" or 2820" or 2822" or 2824" or 2826" or 2828" or 2830" or 2832" or 2834" or 2836" or 2838" or 2840" or 2842" or 2844" or 2846" or 2848" or 2850" or 2852" or 2854" or 2856" or 2858" or 2860" or 2862" or 2864" or 2866" or 2868" or 2870" or 2872" or 2874" or 2876" or 2878" or 2880" or 2882" or 2884" or 2886" or 2888" or 2890" or 2892" or 2894" or 2896" or 2898" or 2900" or 2902" or 2904" or 2906" or 2908" or 2910" or 2912" or 2914" or 2916" or 2918" or 2920" or 2922" or 2924" or 2926" or 2928" or 2930" or 2932" or 2934" or 2936" or 2938" or 2940" or 2942" or 2944" or 2946" or 2948" or 2950" or 2952" or 2954" or 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3178" or 3180" or 3182" or 3184" or 3186" or 3188" or 3190" or 3192" or 3194" or 3196" or 3198" or 3200" or 3202" or 3204" or 3206" or 3208" or 3210" or 3212" or 3214" or 3216" or 3218" or 3220" or 3222" or 3224" or 3226" or 3228" or 3230" or 3232" or 3234" or 3236" or 3238" or 3240" or 3242" or 3244" or 3246" or 3248" or 3250" or 3252" or 3254" or 3256" or 3258" or 3260" or 3262" or 3264" or 3266" or 3268" or 3270" or 3272" or 3274" or 3276" or 3278" or 3280" or 3282" or 3284" or 3286" or 3288" or 3290" or 3292" or 3294" or 3296" or 3298" or 3300" or 3302" or 3304" or 3306" or 3308" or 3310" or 3312" or 3314" or 3316" or 3318" or 3320" or 3322" or 3324" or 3326" or 3328" or 3330" or 3332" or 3334" or 3336" or 3338" or 3340" or 3342" or 3344" or 3346" or 3348" or 3350" or 3352" or 3354" or 3356" or 3358" or 3360" or 3362" or 3364" or 3366" or 3368" or 3370" or 3372" or 3374" or 3376" or 3378" or 3380" or 3382" or 3384" or 3386" or 3388" or 3390" or 3392" or 3394" or 3396" or 3398" or 3400" or 3402" or 3404" or

Table No. 2-D Accepted Sewer Pipe for Use as Sewer Force Main for Specific Applications			
USE	PIPE DESCRIPTION	ACCEPTABLE JOINT	REMARKS
Sewer force main piping within the sanitary radius of a water supply well. NOTE: The following minimum distances shall be maintained from wells based on wellhead elevations: -10 gpm: 25 feet -10-50 gpm: 75 feet -50 gpm: 100 feet  OR Sewer force main within 25 feet of an open manhole, surface or groundwater drain, footing or foundation drain.  To reduce separation distances for the following water drains, listed in Table 2D-1: <ul style="list-style-type: none"><li>- House latrine on adjacent property</li><li>- Building served</li><li>- Property line</li><li>- Pressure water lines</li><li>- Swimming pools</li><li>- Accessory structures</li><li>- Utility service trench</li><li>- Closed loop perforated borehole (10 feet minimum)</li></ul>	PVC pressure pipe ASTM D 2241, SDR 26, 17, or 11.7	Bell and spigot with compression rubber gaskets	
	PVC pressure water pipe ASTM C 905 (PC 200 psi minimum)		
	PVC ASTM D 1781 / ASTM D 2685, Schedule 40 or Schedule 80	Solvent welded, threaded joints or gasketed couplings	
	PE ASTM D 2733 PE ASTM D 2737	No joints within 75 ft. of well or 25 ft. of open manhole, ground or surface water drains	Pipe available in 100-ft. and longer coiled lengths
	PE ASTM D 3035, SDR 11 or lower	No joints, heat-bonded connections or	

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## Section III: Piping

- Water Pipe Trenches**
  - Water Service & Building Sewers in Same Trench
  - Water Service & Building Sewer Crossings

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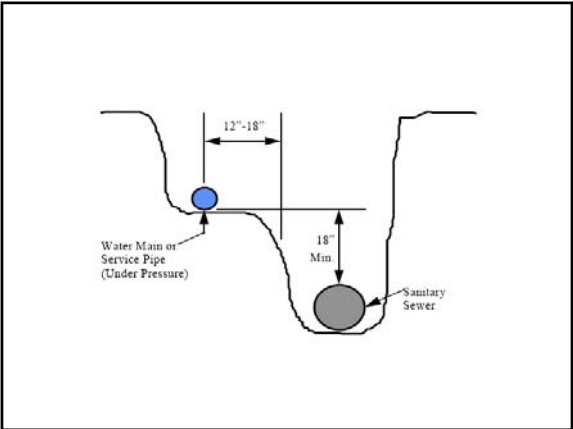
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## Section III: Piping

- **Air Pressure Testing of Sewer Pipe**

- Sewer Lines Between 25-75 feet from well

Definitions, Location and Piping, Tech. Standards Section I-III

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